

Applicant : Jiro Kishimoto et al.  
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Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-33. canceled

34. (previously presented) A cell culture, comprising: a dermal papilla (DP) cell, a cell culture medium, and a Wnt polypeptide or a functional fragment or analog thereof, in an amount sufficient to promote or maintain the DP cell in anagen phase.

35. (previously presented) The culture of claim 34, wherein the Wnt polypeptide is Wnt 3a.

36-108. canceled

109. (New) The cell culture of claim 34, wherein the Wnt polypeptide is Wnt 3.

110. (New) The cell culture of claim 34, wherein the Wnt polypeptide is Wnt 4.

111. (New) The cell culture of claim 34, wherein the Wnt polypeptide is Wnt 7a.

112. (New) The cell culture of claim 34, wherein the Wnt polypeptide is Wnt 7b.

113. (New) A cell culture, comprising a dermal papilla (DP) cell, a cell culture medium, and a Wnt polypeptide in an amount sufficient to promote or maintain the DP cell in anagen phase.

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114. (New) The cell culture of claim 113, wherein the Wnt polypeptide is Wnt 3.
115. (New) The cell culture of claim 113, wherein the Wnt polypeptide is Wnt 4.
116. (New) The cell culture of claim 113, wherein the Wnt polypeptide is Wnt 3a.
117. (New) The cell culture of claim 113, wherein the Wnt polypeptide is Wnt 7a.
118. (New) The cell culture of claim 113, wherein the Wnt polypeptide is Wnt 7b.
119. (New) The cell culture of claim 34, wherein the DP cell is isolated.
120. (New) The cell culture of claim 35, wherein the DP cell is isolated.
121. (New) The cell culture of claim 109, wherein the DP cell is isolated.
122. (New) The cell culture of claim 110, wherein the DP cell is isolated.
123. (New) The cell culture of claim 111, wherein the DP cell is isolated.
124. (New) The cell culture of claim 112, wherein the DP cell is isolated.
125. (New) The cell culture of claim 113, wherein the DP cell is isolated.
126. (New) The cell culture of claim 114, wherein the DP cell is isolated.
127. (New) The cell culture of claim 115, wherein the DP cell is isolated.

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128. (New) The cell culture of claim 116, wherein the DP cell is isolated.
129. (New) The cell culture of claim 117, wherein the DP cell is isolated.
130. (New) The cell culture of claim 118, wherein the DP cell is isolated.
131. (New) The cell culture of claim 34, wherein the Wnt polypeptide is recombinant.
132. (New) The cell culture of claim 35, wherein the Wnt polypeptide is recombinant.
133. (New) The cell culture of claim 109, wherein the Wnt polypeptide is recombinant.
134. (New) The cell culture of claim 110, wherein the Wnt polypeptide is recombinant.
135. (New) The cell culture of claim 111, wherein the Wnt polypeptide is recombinant.
136. (New) The cell culture of claim 112, wherein the Wnt polypeptide is recombinant.
137. (New) The cell culture of claim 113, wherein the Wnt polypeptide is recombinant.
138. (New) The cell culture of claim 114, wherein the Wnt polypeptide is recombinant.
139. (New) The cell culture of claim 115, wherein the Wnt polypeptide is recombinant.
140. (New) The cell culture of claim 116, wherein the Wnt polypeptide is recombinant.
141. (New) The cell culture of claim 117, wherein the Wnt polypeptide is recombinant.

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142. (New) The cell culture of claim 118, wherein the Wnt polypeptide is recombinant.
143. (New) The cell culture of claim 34, wherein the Wnt polypeptide has been exogenously added to the cell culture.
144. (New) The cell culture of claim 35, wherein the Wnt polypeptide has been exogenously added to the cell culture.
145. (New) The cell culture of claim 109, wherein the Wnt polypeptide has been exogenously added to the cell culture.
146. (New) The cell culture of claim 110, wherein the Wnt polypeptide has been exogenously added to the cell culture.
147. (New) The cell culture of claim 111, wherein the Wnt polypeptide has been exogenously added to the cell culture.
148. (New) The cell culture of claim 112, wherein the Wnt polypeptide has been exogenously added to the cell culture.
149. (New) The cell culture of claim 113, wherein the Wnt polypeptide has been exogenously added to the cell culture.
150. (New) The cell culture of claim 114, wherein the Wnt polypeptide has been exogenously added to the cell culture.
151. (New) The cell culture of claim 115, wherein the Wnt polypeptide has been exogenously added to the cell culture.

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152. (New) The cell culture of claim 116, wherein the Wnt polypeptide has been exogenously added to the cell culture.
153. (New) The cell culture of claim 117, wherein the Wnt polypeptide has been exogenously added to the cell culture.
154. (New) The cell culture of claim 118, wherein the Wnt polypeptide has been exogenously added to the cell culture.
155. (New) The cell culture of claim 34, further comprising a cell that expresses the Wnt polypeptide.
156. (New) The cell culture of claim 35, further comprising a cell that expresses the Wnt polypeptide.
157. (New) The cell culture of claim 109, further comprising a cell that expresses the Wnt polypeptide.
158. (New) The cell culture of claim 110, further comprising a cell that expresses the Wnt polypeptide.
159. (New) The cell culture of claim 111, further comprising a cell that expresses the Wnt polypeptide.
160. (New) The cell culture of claim 112, further comprising a cell that expresses the Wnt polypeptide.

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161. (New) The cell culture of claim 113, further comprising a cell that expresses the Wnt polypeptide.

162. (New) The cell culture of claim 114, further comprising a cell that expresses the Wnt polypeptide.

163. (New) The cell culture of claim 115, further comprising a cell that expresses the Wnt polypeptide.

164. (New) The cell culture of claim 116, further comprising a cell that expresses the Wnt polypeptide.

165. (New) The cell culture of claim 117, further comprising a cell that expresses the Wnt polypeptide.

166. (New) The cell culture of claim 118, further comprising a cell that expresses the Wnt polypeptide.

167. (New) A cell culture comprising an isolated dermal papilla (DP) cell, cell culture medium, and a recombinant Wnt polypeptide selected from the group consisting of: Wnt 3, Wnt 3a, Wnt 4, Wnt 7a and Wnt 7b in an amount sufficient to promote or maintain the DP cell in anagen phase.

168. (New) A method of culturing a dermal papilla (DP) cell, comprising: maintaining the cell culture of claim 34.

169. (New) A method of culturing a dermal papilla (DP) cell, comprising: maintaining the cell culture of claim 113.

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170. (New) A method of promoting hair growth in a subject, comprising: providing the cell culture of claim 52, wherein the DP cell is from the subject; and grafting the DP cell from the cell culture onto the skin of the subject, thereby promoting hair growth in a subject.

171. (New) A method of promoting hair growth in a subject, comprising: providing the cell culture of claim 34, wherein the DP cell is from the subject; and grafting the DP cell from the cell culture onto the skin of the subject, thereby promoting hair growth in a subject.